

1 CLAIMS

2 What is claimed is:

3

4 1. A method comprising:

- 5 a. storing, in a receiver, an advertisement template  
6 identified by a first resource identifier;  
7 b. monitoring a data service channel of a broadcast  
8 signal for an advertisement summary, wherein the  
9 advertisement summary includes a second resource  
10 identifier and custom advertisement information;  
11 and  
12 c. creating a custom advertisement using the  
13 advertisement template and the custom  
14 advertisement information if the second resource  
15 identifier matches the first resource identifier  
16 of the information resource.

17  
18 2. The method of Claim 1, further comprising displaying  
19 the custom advertisement.

20  
21 3. The method of Claim 1, wherein the custom  
22 advertisement information includes a third resource  
23 identifier.

24  
25 4. The method of Claim 1, wherein the first and second  
26 resource identifiers are local resource identifiers.

27  
28 5. A method for broadcasting interactive advertising  
29 content for display on a plurality of remote  
30 receivers, the method comprising:

- 31 a. storing an advertisement template in the  
32 plurality of remote receivers;

- 1        b.    embedding an advertisement summary in a data
- 2            service channel of a video signal, the
- 3            advertisement summary including:
- 4            i.    a resource identifier unique to the
- 5                advertisement template; and
- 6            ii.   custom advertisement information to combine
- 7                with the advertisement template to create a
- 8                custom advertisement; and
- 9        c.    broadcasting the signal.
- 10
- 11    6.    The method of Claim 5, wherein the signal is broadcast
- 12        to a second plurality of receivers in addition to the
- 13        first-mentioned plurality of receivers, and wherein
- 14        the information resource does not reside on the second
- 15        plurality of receivers.
- 16
- 17    7.    The method of Claim 5, wherein the data service
- 18        channel is a captioning service channel.
- 19
- 20    8.    The method of Claim 5, wherein the broadcast signal is
- 21        a National Television Standards Committee (NTSC) video
- 22        signal including a text or data-service channel.
- 23
- 24    9.    The method of Claim 8, wherein the data service
- 25        channel is line 21 of the NTSC video signal.
- 26
- 27    10.   The method of Claim 9, wherein the broadcast video
- 28        signal is selected from a group consisting of Phase
- 29        Alternate Lines (PAL), Sequential Couleur Avec Memoire
- 30        (SECAM), High Definition Television (HDTV), a Digital
- 31        Video Broadcasting (DVB) signal, or an Advanced
- 32        Television Systems Committee (ATSC) signal.

1  
2 11. The method of Claim 5 further comprising generating a  
3 checksum for the resource identifier and the  
4 advertisement summary and inserting the checksum into  
5 the advertisement summary.

6  
7 12. A machine-readable medium having stored thereon data  
8 representing sequences of instructions, wherein the  
9 instructions, when executed by a processor, cause the  
10 processor to embed an advertisement summary in a data  
11 service channel of a signal, the advertisement summary  
12 including:

- 13 a. a resource identifier unique to an advertising  
14 template residing on a remote receiver; and  
15 b. custom advertisement information to combine with  
16 the advertisement template to create a custom  
17 advertisement.

18  
19 13. A machine-readable medium having stored thereon data  
20 representing sequences of instructions, wherein the  
21 instructions, when executed by a processor, cause the  
22 processor to:

- 23 a. monitor a data service channel of a broadcast  
24 video signal for an advertisement summary,  
25 wherein the advertisement summary includes a  
26 resource identifier and custom advertisement  
27 information;  
28 b. combine the custom advertisement information with  
29 an advertisement template upon receipt of the  
30 advertisement summary, the combined advertisement  
31 information and advertisement template creating a  
32 custom advertisement; and

- 1 c. display the custom advertisement.  
2
- 3 14. A system comprising:  
4 a. a broadcast signal source configured to broadcast  
5 a video signal in a broadcast video channel;  
6 b. a receiver tuned to receive the video signal and  
7 including local memory, wherein the local memory  
8 includes an advertisement template;  
9 c. means for embedding an advertisement summary  
10 addressed to the advertisement template in the  
11 video signal.  
12
- 13 15. The system of claim 14, wherein the receiver is  
14 configured to combine information provided in the  
15 advertisement summary with formatting information  
16 provided in the advertisement template to produce a  
17 custom advertisement.  
18
- 19 16. The system of claim 14, wherein the information  
20 provided in the advertisement summary includes a  
21 hyperlink.  
22
- 23 17. The system of claim 14, wherein the advertisement  
24 template further comprises a time stamp.  
25
- 26 18. The system of claim 14, wherein the advertisement  
27 summary includes a time-out attribute defining a time  
28 to end the custom advertisement.  
29
- 30 19. The system of claim 14, wherein the advertisement  
31 summary includes an attribute that determines at least  
32 one of the color, font style, font size, transparency,

1 texture, advertisement size, and advertisement  
2 position of the custom advertisement.  
3

4 20. The system of claim 14, wherein the advertisement  
5 summary includes a view attribute that determines  
6 whether the custom advertisement is displayed  
7 automatically without user intervention.  
8

9 21. A system comprising:

- 10 a. a broadcast signal source configured to broadcast  
11 a program of a specified duration in a broadcast  
12 video signal having a data service channel that  
13 includes an available data bandwidth;
- 14 b. a receiver tuned to receive the program and  
15 including local memory, wherein the local memory  
16 contains a first set of data representing a  
17 template;
- 18 c. means for embedding a second set of data in the  
19 video signal and broadcasting the second set of  
20 data to the receiver, wherein the second set of  
21 data represents a trigger addressed to the  
22 template; and
- 23 d. means for combining the first and second sets of  
24 data to form a third set of data representing a  
25 video image for display on the receiver;
- 26 e. wherein the third set of data is greater than a  
27 product of the available data bandwidth and the  
28 specified duration of the program; and
- 29 f. wherein the first set of data is less than the  
30 product of the available data bandwidth and the  
31 specified duration of the program.  
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**Abstract.** We study the asymptotic behavior of the eigenvalues of the Laplacian operator on a domain in  $\mathbb{R}^n$ . The domain is assumed to be bounded and smooth. We consider the Dirichlet boundary conditions. The main result shows that the eigenvalues are asymptotically distributed according to Weyl's law. This result is proved by using the method of stationary phase.